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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	09/716,320
				Filing Date	21 November 2000
				First Named Inventor	Esther H. CHANG et al.
				Group Art Unit	1635
				Examiner Name	Schmidt
Sheet	1	of	5	Attorney Docket Number	2444-109

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
MUS		5,576,208		Monia et al.	11/19/1996
		5,599,704		Thompson et al.	02/04/1997
		5,734,039		Calabretta et al.	03/31/1998
		6,027,892		Chang et al.	02/22/2000

FOREIGN PATENT DOCUMENTS



Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office	Number	Kind Code (if known)			
MUS		PCT	WO 95/32987		Isis Pharmaceuticals, Inc.	12/07/1995	
MUS		PCT	WO 97/10007		Genetic Therapy, Inc. et al.	03/20/1997	
MUS		PCT	WO 97/28817		Pi-Wan CHENG	08/14/1997	
MUS		PCT	WO 94/15645		Texas Biotechnology Corp.	07/21/1994	

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⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.

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		AOKI, K. et al. "Liposome-mediated in Vivo Gene Transfer of Antisense K-ras Construct Inhibits Pancreatic Tumor Dissemination in the Murine Peritoneal Cavity", <i>Cancer Research</i> , Sept. 1, 1995; 55:3810-3816				
		BERTRAM BERTRAM, J. et al. "Reduction of erbB2 gene product in mamma carcinoma cell lines by erbB2 mRNA-specific and tyrosine kinase consensus phosphorothioate antisense oligonucleotides", <i>Biochem. Biophys. Res. Commun.</i> , Apr. 15, 1994; 200(1):661-667				
	MMS		BRADLEY, M.O. et al. "Reversal of Transformed Phenotypes by Antisense fos", <i>Annals New York Academy of Sciences</i> , (1992); pp. 124-135			
	MMS		BRANCH, A.D. "A good antisense molecule is hard to find", <i>TIBS</i> , Feb. 1998; 23:45-50			
	MMS		CHENG, P.-W. "Receptor Ligand-Facilitated Gene Transfer: Enhancement of Liposome-Mediated Gene Transfer and Expression by Transferrin", <i>Human Gene Therapy</i> , Feb. 10, 1996; 7:275-282			
	MMS		CROOKE, S.T. "Basic Principles of Antisense Therapeutics", Chapter 1; <i>Antisense Research and Application</i> , ed. Stanley T. Crooke, Springer-Verlag, New York (July 1998) pp. 1-50 plus 2 cover pages			
	MMS		DAUM, G. et al. "The ins and outs of Raf kinases", <i>TIBS</i> , Nov. 1994; 19:474-479			
	MMS		DEAN, N.M. et al. "Antisense oligonucleotides as inhibitors of signal transduction: development from research tools to therapeutic agents", <i>Biochem. Soc. Trans.</i> , 1996; 24:623-629			
	MMS		DZAU, V.J. et al. "Fusigenic viral liposome for gene therapy in cardiovascular diseases", <i>Proc. Natl. Acad. Sci. USA</i> , Oct. 1996; 93:11421-11425			
	MMS		FEERO, W.G. et al. "Selection and use of ligands for receptor-mediated gene delivery to myogenic cells", <i>Gene Therapy</i> , 1997; 4:664-674			
MMS		FILION, M.C. et al. "Toxicity and immunomodulatory activity of liposomal vectors formulated with cationic lipids toward immune effector cells", <i>Biochimica et Biophysica Acta</i> , 1997; 1329:345-356				
Examiner Signature				Date Considered	4/30/02	

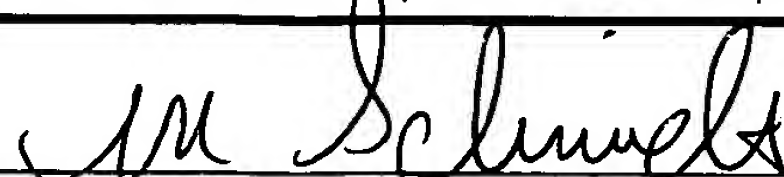
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MMS		FLANAGAN, W.M. et al. "Cellular penetration and antisense activity by a phenoxazine-substituted heptanucleotide", <i>Nature Biotechnology</i> , Jan. 1999; 17:48-52			
MMS		GEWIRTZ, A.M. et al. "Facilitating oligonucleotide delivery: Helping antisense deliver on its promise", <i>Proc. Natl. Acad. Sci. USA</i> , Apr. 1996; 93:3161-3163			
MMS		GRIMALDI, S. et al. "Attempts to use liposomes and RBC ghosts as vectors in drug and antisense therapy of virus infection", <i>Res. Virol.</i> , 1997; 148:177-180			
MMS		GURA, T. "Systems for Identifying New Drugs are Often Faulty", <i>Science</i> , Nov. 7, 1997; 278:1041-1042			
MMS		HE, Y. et al. "Growth Inhibition of Human Papillomavirus 16 DNA-positive Mouse Tumor by Antisense RNA Transcribed from U6 Promoter", <i>Cancer Res.</i> , Sept. 15, 1997; 57:3993-3999			
MMS		KASID, U. et al. "Effect of Antisense c-raf-1 on Tumorigenicity and Radiation Sensitivity of a Human Squamous Carcinoma", <i>Science</i> , March 10, 1989; 243:1354-1356			
MMS		KASID, U. et al. "The raf Oncogene is Associated with a Radiation-Resistant Human Laryngeal Cancer", <i>Science</i> , Aug. 28, 1987; 237:1039-1041			
MMS		KIZAKA-KONDOH, S. et al. "Raf-1 Protein Kinase is an Integral Component of the Oncogenic Signal Cascade Shared by Epidermal Growth Factor and Platelet-Derived Growth Factor", <i>Molecular and Cellular Biology</i> , Nov. 1992; 12(11):5078-5086			
MMS		LAPPALAINEN, K. et al. "Cationic liposomes mediated delivery of antisense oligonucleotides targeted to HPV 16 E7 mRNA in CaSki cells", <i>Antiviral Research</i> , 1994; 23:119-130			
MMS		LAVIGNE, C. et al. "Enhanced Antisense Inhibition of Human Immunodeficiency Virus Type 1 in Cell Cultures by DLS Delivery System", <i>Biochem. Biophys. Res. Comm.</i> , 1997; 237:566-571			
MMS		LEDWITH, B.J. et al. "Antisense-fos RNA Causes Partial Reversion of the Transformed Phenotypes Induced by the c-Ha-ras Oncogene", <i>Molecular and Cellular Biology</i> , Apr. 1990; 10(4):1545-1555			
MMS		LEE, R.J. et al. "Folate-targeted, Anionic Liposome-entrapped Polylysine-condensed DNA for Tumor Cell-specific Gene Transfer", <i>J. Biol. Chem.</i> , Apr. 5, 1996; 271(14):8481-8487			
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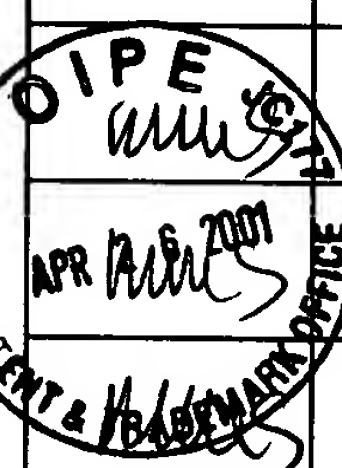

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MUS		MAHER, L.J. et al. "Specific Hybridization Arrest of Dihydrofolate Reductase mRNA in Vitro Using Anti-sense RNA or Anti-sense Oligonucleotides", <i>Archives of Biochemistry and Biophysics</i> , Feb. 15, 1987; 253(1):214-220			
MUS		MORISHITA, R. et al. "Molecular Delivery System for Antisense Oligonucleotides: Enhanced Effectiveness of Antisense Oligonucleotides by HVJ-liposome Mediated Transfer", <i>J. Cardiovasc. Pharmacol. Therapeut.</i> , 1996; 2(3):213-222			
MUS		PLANK, C. et al. "Activation of the Complement System by Synthetic DNA Complexes: A Potential Barrier for Intravenous Gene Delivery", <i>Human Gene Therapy</i> , Aug. 1, 1996; 7:1437-1446			
MUS		RENNEISEN, K. et al. "Inhibition of Expression of Human Immunodeficiency Virus-1 in Vitro by Antibody-targeted Liposomes Containing Antisense RNA to the env Region", <i>J. Biological Chemistry</i> , Sept. 25, 1990; 265(27):16337-16342			
MUS		ROJANASAKUL, Y. "Antisense oligonucleotide therapeutics: drug delivery and targeting", <i>Advanced Drug Delivery Reviews</i> , 1996; 18:115-131			
MUS		ROPERT, C. et al. "Oligonucleotides Encapsulated in pH Sensitive Liposomes are Efficient Toward Friend Retrovirus", <i>Biochem. Biophys. Res. Commun.</i> , Mar. 16, 1992; 183(2):879-885			
MUS		SEPP-LORENZINO, L. et al. "Signal transduction pathways induced by heregulin in MDA-MB-453 breast cancer cells", <i>Oncogene</i> , 1996; 12:1679-1687			
MUS		SETH, P. et al. "Adenovirus-mediated Gene Transfer to Human Breast Tumor Cells: An Approach for Cancer Gene Therapy and Bone Marrow Purging", <i>Cancer Research</i> , Mar. 15, 1996; 56:1346-1351			
MUS		SIMOES, S. et al. "Enhancement of Cationic Liposome-mediated Gene Delivery by Transferrin and Fusogenic Peptides", <i>Proceedings of the 24th International Symposium on Controlled Release of Bioactive Materials</i> , June 15-19, 1997; 24:659-660			
MUS		SOLDATENKOV, V.A. et al. "Inhibition of Raf-1 Protein Kinase by Antisense Phosphorothioate Oligodeoxyribonucleotide is Associated with Sensitization of Human Laryngeal Squamous Carcinoma Cells to Gamma Radiation", <i>The Cancer Journal from Scientific American</i> , Jan./Feb. 1997; 3(1):13-20			
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		STEIN, C.A. "Hybridization prediction gets to first base", <i>Nature Biotechnology</i> , Aug. 1999; 17:751-752	
		SUY, S. et al. "Association of Grb2 with Sos and Ras with Raf-1 upon gamma irradiation of breast cancer cells", <i>Oncogene</i> , 1997; 15:53-61	
		TSENG, B.Y. et al. "Antisense oligonucleotide technology in the development of cancer therapeutics", <i>Cancer Gene Therapy</i> , 1994; 1(1):65-70	
MUS		VAUGHN, J.P. et al. "Inhibition of the erbB-2 tyrosine kinase receptor in breast cancer cells by phosphoromonothioate and phosphorodithioate antisense oligonucleotides", <i>Nucleic Acids Research</i> , 1996; 24(22):4558-4564	
MUS		WAGNER, E. et al. "Influenza virus hemagglutinin HA-2 N-terminal fusogenic peptides augment gene transfer by transferrin-polylysine-DNA complexes: Toward a synthetic virus-like gene-transfer vehicle", <i>Proc. Natl. Acad. Sci. USA</i> , Sept. 1992; 89:7934-7938	
MUS		WANG, S. et al. "Delivery of antisense oligodeoxyribonucleotides against the human epidermal growth factor receptor into cultured KB cells with liposomes conjugated to folate via polyethylene glycol", <i>Proc. Natl. Acad. Sci. USA</i> , 1995; 92:3318-3322	
MUS		Wang, Y. et al. "Prolonged Inhibition by X-Rays of DNA Synthesis in Cells Obtained by Transformation of Primary Rat Embryo Fibroblasts with Oncogenes H-ras and v-myc", <i>Cancer Research</i> , 1992; 52:508-514	
MUS		XU, L. et al. "Transferrin-Liposome-Mediated p53 Sensitization of Squamous Cell Carcinoma of the Head and Neck to Radiation in Vitro", <i>Human Gene Therapy</i> , Mar. 1, 1997; 8:467-475	
MUS		XU, M. et al. "Parenteral Gene Therapy with p53 Inhibits Human Breast Tumors In Vivo Through a Bystander Mechanism Without Evidence of Toxicity", <i>Human Gene Therapy</i> , Jan. 20, 1997; 8:177-185	
MUS		ZELPHATI, O. et al. "Synthesis and anti-HIV activity of thiocholesteryl-coupled phosphodiester antisense oligonucleotides incorporated into immunoliposomes", <i>Antiviral Research</i> , 1994; 25:13-25	
MUS		ZELPHATI, O. et al. "Antisense oligonucleotides in solution or encapsulated in immunoliposomes inhibit replication of HIV-1 by several different mechanisms", <i>Nucleic Acids Research</i> , 1994; 22(20):4307-4314	
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